

## A Long Trip North for Fossil Expert

Professor John Long is leaving Australia to take a leading role at the USA's third-largest natural history museum.

Over the past 4 years Dr John Long has wowed the world with astonishing palaeontological discoveries. He's now become the Vice-President of Research and Collections at the Los Angeles County Museum of Natural History.

Before leaving to take up the position he described his new position as putting him "in charge of 35 million specimens and 90 staff". The museum is the third-largest natural history museum in the US, with a crucial role cataloguing the biodiversity and extinct fauna of western North America.

The main museum site is building three new galleries as part of a US\$115 million redevelopment. One of these galleries will be an enormous L-shape formed from two huge halls housing some of the finest dinosaur fossils in the world. Long excitedly announces that this includes "real *T. rex* skeletons, not replicas".

Long says that "leaving Melbourne will be hard," but the appointment is something of a dream for a boy who started collecting fossils at the age of seven. The first fossil he collected was a trilobite, which he later discovered was of a species that was not scientifically described until several years later.

At the age of 13 Long wrote two 100-page volumes called *Fossils of Victoria*, which described the extensive collection he had put together over the previous 6 years. He was awarded the top prize in the junior division of the Australian Science Talent Search and \$60. "Many of the species I found hadn't been described, so I described them," Long says. Alas his specimens were isolated bones from the largest family of fish and this work was never published.

However, Long was determined to become a palaeontologist and studied science at the University of Melbourne.

Two years into the degree he realised that Dr Jim Warren and Prof Pat Vickers-Rich (*AS*, October 2004, p.47) were establishing a vibrant palaeontology program at Monash and switched, completing undergraduate, Honours and doctorate degrees there.

"I had a topic for my PhD with all the finds Warren had made at Mt Howitt," Long says. "I got several papers published out of it." After a few years on "the post-doc circuit", Long settled for 15 years at the Museum of Western Australia. While he published many papers on other topics, Long's name was increasingly associated with Western Australia's Devonian Gogo formation, from which come some of our earliest well-preserved specimens of fish.

Long has been part of naming 50 new genera and species of fossil fish, along with some reptiles and a dinosaur, and has written several popular books on palaeontology, including *The Rise of Fishes* and *Mountains for Madness – A Scientist's Odyssey Through Antarctica*. However, since moving to the Museum of Victoria he has really hit scientific gold, including the discovery that ancient placoderm fish gave birth to live young rather than laying eggs (*AS*, July 2008, pp.16–18).

The story was so big that *Nature* organised a live link between the Australian Science Media Centre and London, where Long got to make his announcement to 60 British journalists, members of the Royal Family and David Attenborough. "It doesn't get much better than that," Long says.

"The thing I'm proudest of is publishing five *Nature* papers in three-and-a-half years," Long says. "Four on Gogo fishes and one on mammals from the Nullarbor caves." He adds that he's also very proud of winning the 2008 *Australasian Science* Prize for this work (*AS*, Nov/Dec 2008, p.4).



John Long holding a Gogo placoderm fossil.

Photo: Prof Lyn Beazley

The Gogo work is so important that Long will remain an honorary research associate at the Museum of Victoria after he moves, and has had the opportunity to do his own research written into his new job's contract.

Gogo is a remarkable site for the extent to which the fossils have been preserved undamaged, but Long says some very promising locations in North America are surprisingly understudied. "There are more people working on Devonian fossils in Australia than in the whole of North America," he says. Naturally this is something he hopes to correct.

Generally speaking, however, American palaeontology is a lot healthier than what Long leaves behind. "Australia is a big country with very few palaeontologists, so it takes a long time to study what we have."

On the other hand, the United States has a culture where dinosaur fossils are hugely valued and museums compete to obtain them. Moreover, the Obama administration has provided a huge boost to science, raising funding by 50% in one year. Long says that the Rudd funding for infrastructure and universities has been "good, but it hasn't helped museums". This matters, he says, "because we do the non-commercial work, filling in the gaps other institutions don't do, like taxonomy and understanding our biodiversity".

Long says his role at the Los Angeles County Museum will enable him to "build a research framework" for a major institution in just these fields. "We'll be putting a direction on things in terms of the big questions facing society: climate change, habitat loss, biodiversity. Learning about what we have and what we could be losing."